

Claims

- [c1] A networked health-monitoring system configured to collect and process patient health-related data, comprising: at least one handheld microprocessor device including a display; and a memory; at least one central server connected to receive health-related data communicated to the microprocessor device; and at least one health care professional computer, remotely located from and in signal communication with the central server to receive patient health-related information based on the patient health-related data received from the handheld microprocessor device, wherein the system is configured to convert the handheld microprocessor device into a healthcare monitoring device that functions to (a) monitor at least one patient health condition; and (b) communicate data related to the monitored condition to the central server.
- [c2] The system of claim 1, wherein the memory includes stored program instructions for generating health-monitoring related information on the display.
- [c3] The system of claim 2, wherein the handheld device is capable of displaying pictorial health-monitoring related

information.

- [c4] The system of claim 3, wherein the handheld device is capable of displaying animated health-monitoring related information.
- [c5] The system of claim 2, wherein the memory is a program cartridge.
- [c6] The system of claim 4, wherein the handheld device includes buttons,. keys or switches.
- [c7] The system of claim 2, further comprising at least one other health-monitoring device arranged to communicate health-related data to the health care professional computer
- [c8] The system of claim 7, further comprising a data management unit configured to facilitate collection of patient health-related data.
- [c9] The system of claim 8, wherein the data management unit facilitates collection of health-related data by receiving data related to the monitored condition from at least one of the health-monitoring devices.
- [c10] The system of claim 7, wherein at least one of the health-monitoring devices includes one or more of the set consisting of a blood glucose monitor;a peak flow

meter; a blood pressure monitor; a pulse monitor; and a body temperature monitor.

[c11] The system of claim 7, wherein the remote sites further include at least one personal computer connected to the data management unit.

[c12] The system of claim 2, wherein the system generates at least one report based on the health-related data.

[c13] The system of claim 12, wherein at least one report is standardized

[c14] The system of claim 12, wherein the system is configured to allow a health care professional to select which of a plurality of standardized reports is produced.

[c15] The system of claim 12, wherein the report uses graphs and/or icons.

[c16] The system of claim 12, wherein the report can be generated periodically.

[c17] The system of claim 12, wherein the server can generate the report.

[c18] The system of claim 12, wherein the system is configured to cause the presentation of at least one report on the display at a remote patient site.

- [c19] The system of claim 12, wherein the system can display statistical and/or trend information.
- [c20] The system of claim 19, wherein the system can display statistical or trend information to the patient.
- [c21] The system of claim 12, wherein the report includes information data for a period of time.
- [c22] The system of claim 2, wherein the system is configured to transmit at least one message for display on at least one display.
- [c23] The system of claim 22, wherein the message includes step-by-step instructions.
- [c24] The system of claim 22, wherein the message includes results of a test.
- [c25] The system of claim 22, wherein the message includes diagnostic information indicating whether a test has proceeded in a normal fashion.
- [c26] The system of claim 22, wherein the message is a multi-line message.
- [c27] The system of claim 22, wherein the message is a health care professional selected message.

- [c28] The system of claim 22, wherein the health care professional generates the selected message.
- [c29] The system of claim 22, wherein the message is a educational or motivational.
- [c30] The system of claim 27, wherein the system is configured to transmit the message can be to a specific patient .
- [c31] The system of claim 27, wherein the system is configured to transmit the message automatically to the patient.
- [c32] The system of claim 27, wherein the system enables the patient to choose when to receive the message.
- [c33] The system of claim 27, wherein the message can be stored before being transmitted to the patient.
- [c34] The system of claim 2, wherein the system is configured to allow the patient to control the display of information using at least one menu.
- [c35] The system of claim 34, wherein the menu allows the patient to select any one of the operational modes from the set consisting of: a display mode for displaying relevant information; an input mode for providing information; and a communications mode for establishing a link

with the central server.

- [c36] The system of claim 31, wherein the menu allows a patient to select a monitoring mode in which at least one health-monitoring device is used to monitor at least one patient health condition at at least one remote patient site; and to communicate data related to the monitored condition to the central server.
- [c37] The system of claim 34, wherein the menu allows the patient to display messages or instructions from a health care professional.
- [c38] The system of claim 2, wherein the system is configured to enable the patient to respond to information on the display by using a cursor or other indicator positioned at a selected item.
- [c39] The system of claim 2, wherein the system is configured to enable programs to be provided from the server, for storage in a memory and execution at a remote patient site.
- [c40] The system of claim 2, wherein the patient can indicate user experienced symptoms to the system.
- [c41] The system of claim 2, wherein the system can capture quantitative measurements.

- [c42] The system of claim 41, wherein the system can capture medication data.
- [c43] The system of claim 1, wherein the collected patient health-related data includes time data.
- [c44] The system of claim 1, wherein the healthcare professional receives the report after transmitting an authorization code to the server that identifies an associated healthcare professional as an authorized user.
- [c45] A method of collecting and processing patient health-related data, comprising: using at least one handheld microprocessor device, including a display and a memory, as a healthcare monitoring device to facilitate the collection of patient health-related data resulting from the monitoring of at least one patient health condition; connecting at least one central server to receive the collected data; communicating the collected data from the handheld device to the central server; putting at least one remotely-located, health-care-professional computer in signal communication with the central server; and receiving, at the health care professional computer, patient health-related information based on the collected data communicated to the server
- [c46] The method of claim 45, wherein the memory includes

stored program instructions for generating health-monitoring related information on the display.

[c47] The method of claim 46, further comprising displaying pictorial health-monitoring related information on the handheld device.

[c48] The method of claim 47, further comprising displaying animated health-monitoring related information on the handheld device.

[c49] The method of claim 46, wherein the memory is a program cartridge.

[c50] The method of claim 48, wherein the handheld device includes buttons, keys or switches.

[c51] The method of claim 46, further comprising at least one other health-monitoring device to communicate arranging health-related data to the health care professional computer.

[c52] The method of claim 51, further comprising using a data management unit to facilitate collection of patient health-related data.

[c53] The method of claim 52, wherein the data management unit facilitates collection of health-related data by receiving data related to the monitored condition from at

least one of the health-monitoring devices.

- [c54] The method of claim 53, further comprising connecting at least one personal computer to the data management unit at the remote sites.
- [c55] The method of claim 51, wherein at least one of the health-monitoring devices is one or more of the set consisting of a blood glucose monitor;a peak flow meter;a blood pressure monitor;a pulse monitor; and a body temperature monitor.
- [c56] The method of claim 46, further comprising producing reports based on the health-related data.
- [c57] The method of claim 56, wherein the reports are standardized.
- [c58] The method of claim 57, wherein a health care professional selects which of a plurality of standardized reports is produced.
- [c59] The method of claim 56, wherein the reports use graphs and/or icons.
- [c60] The method of claim 56, wherein the reports can be generated periodically.
- [c61] The method of claim 56, wherein the server can generate

the report.

- [c62] The method of claim 56, further comprising displaying at least one report on a display at a remote patient site.
- [c63] The method of claim 56, further comprising displaying statistical and/or trend information.
- [c64] The method of claim 63, wherein the statistical or trend information is displayed to the patient.
- [c65] The method of claim 56, wherein the report includes information data for a period of time.
- [c66] The method of claim 46, further comprising transmitting at least one message for display on at least one display.
- [c67] The method of claim 66, wherein the message includes step-by-step instructions.
- [c68] The method of claim 66, wherein the message includes results of a test.
- [c69] The method of claim 66, wherein the message includes diagnostic information indicating whether a test has proceeded in a normal fashion.
- [c70] The method of claim 66, wherein the message is a multi-line message.

- [c71] The method of claim 66, wherein a health care professional selects the message.
- [c72] The method of claim 66 wherein the health care professional generates the selected message.
- [c73] The method of claim 66, wherein the message is educational or motivational.
- [c74] The method of claim 71, further comprising transmitting the message to a specific patient.
- [c75] The method of claim 71, further comprising transmitting the message automatically to the patient.
- [c76] The method of claim 71, further comprising transmitting to the patient when the patient chooses.
- [c77] The method of claim 76, further comprising storing the message before transmitting to the patient.
- [c78] The method of claim 46, wherein the patient controls the display of information using at least one menu.
- [c79] The method of claim 48, wherein the menu allows a patient to select any one of the operational modes from the set consisting of:
 - a display mode for displaying relevant information;
 - an input mode for providing information;
 - and a communications mode for establishing a link with

the central server.

- [c80] The method of claim 78, wherein using the menu the patient selects a monitoring mode in which at least one health-monitoring device is used to monitor at least one patient health condition at at least one remote patient site; and to communicate data related to the monitored condition to the central server.
- [c81] The method of claim 78, wherein the menu allows a patient to display messages or instructions from a health care professional.
- [c82] The method of claim 46, wherein the patient responds to information on the display by using a cursor or other indicator positioned at a selected item.
- [c83] The method of claim 46, further comprising: providing programs from the server to a remote patient site; and storing in a memory and executing the programs at a remote site.
- [c84] The method of claim 46, wherein the patient indicates user experienced symptoms to the handheld device.
- [c85] The method of claim 46, further comprising capturing quantitative measurements.
- [c86] The method of claim 85, further comprising capturing

medication data.

- [c87] The method of claim 45, wherein the collected patient health-related data includes time data.
- [c88] The method of claim 56, wherein the healthcare professional receives the report after transmitting an authorization code to the server that identifies an associates healthcare professional as an authorized user.
- [c89] A networked health-monitoring system configured to collect and process patient health-related data, comprising: At least one handheld microprocessor means, including a displayed and a memory, for monitoring at least one patient health condition; and communicating data related to the monitored condition to a central server means; at least one central server means for receiving health-related data communicated to the microprocessor device; and at least one health care professional computer, remotely located from and in signal communication with the central server to receive patient health-related information based on the patient health-related data received from the handheld microprocessor device.